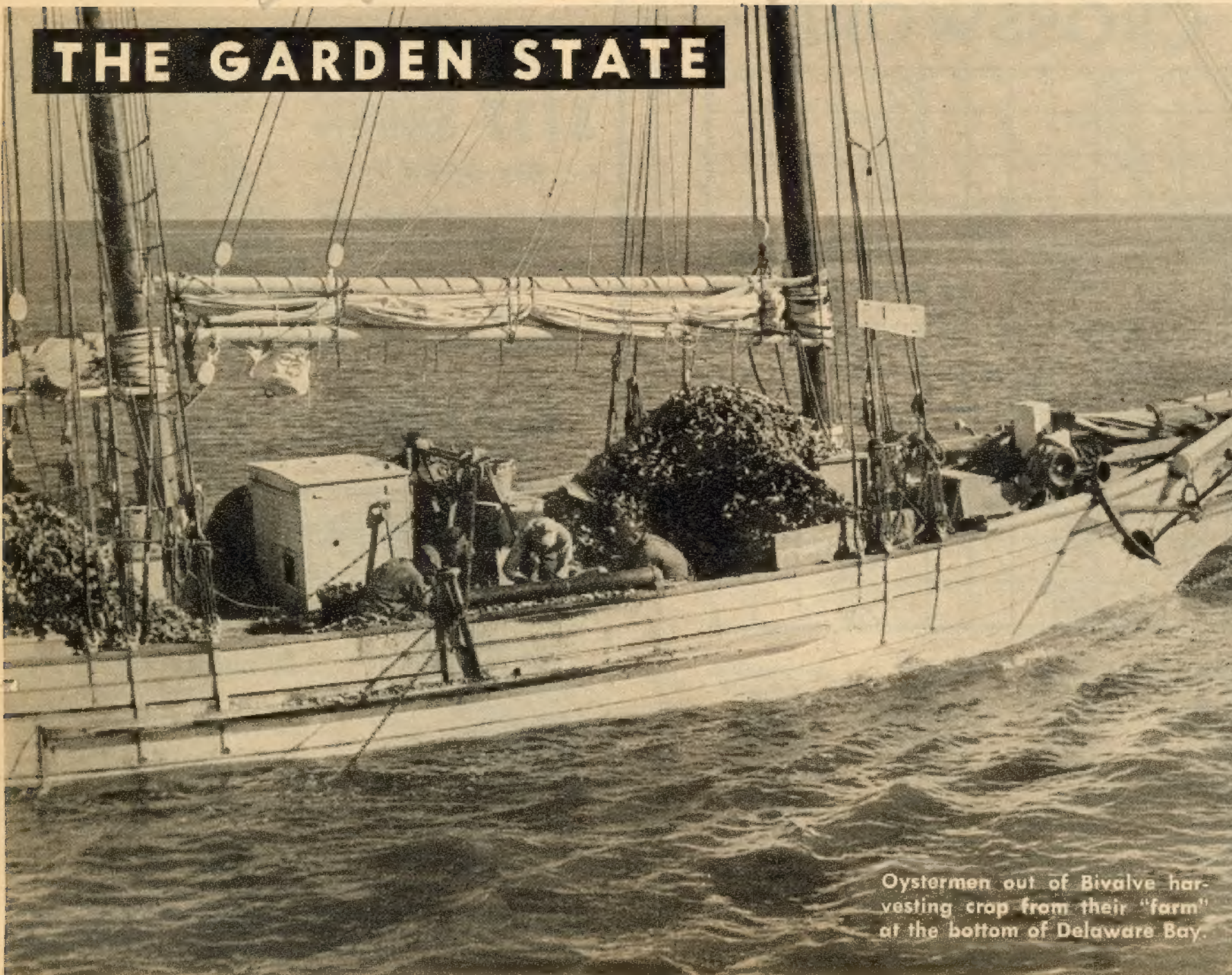
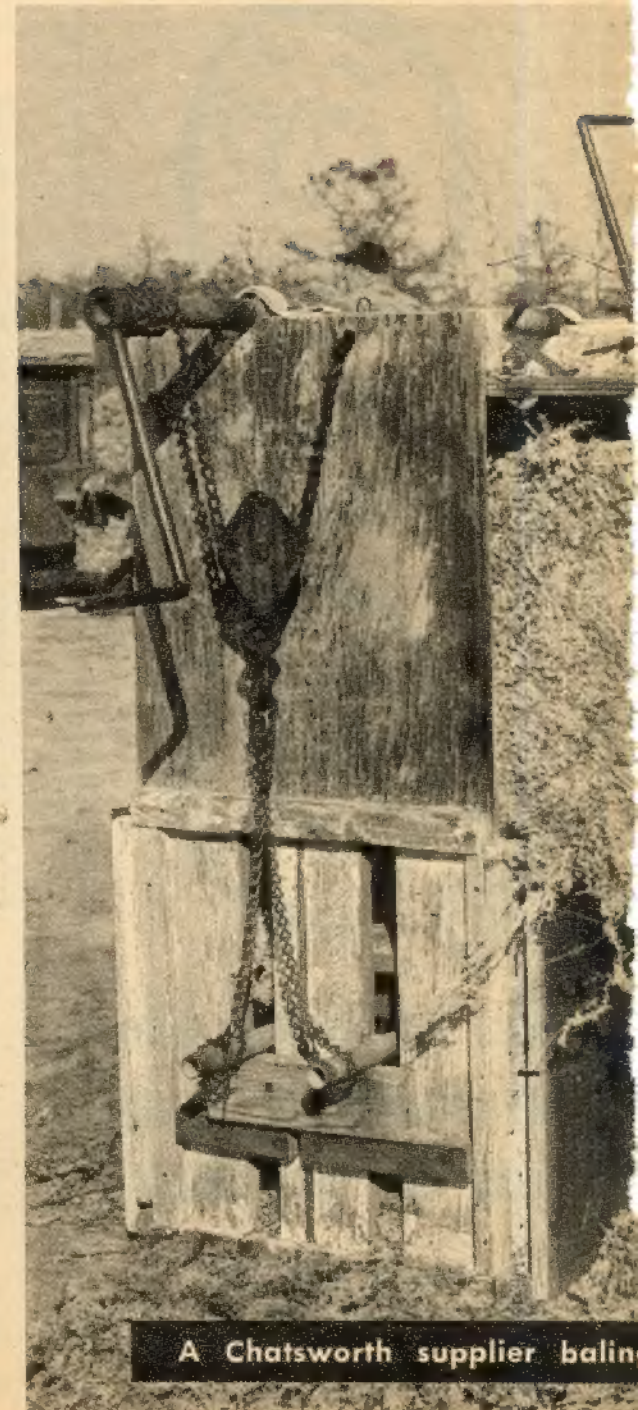


THE GARDEN STATE



Oystermen out of Bivalve harvesting crop from their "farm" at the bottom of Delaware Bay.



A Chatsworth supplier baling

"PRAY, what constitutes agriculture?"

Dr. Julius Nelson, biologist at the New Jersey Experiment Station, wrote that question as he carefully penned his 1888 annual report. Then, Yankee fashion, he answered himself with more questions in a classic reply that still sounds logical—and worth reading, since the argument about where agriculture begins and where it ends still goes on.

"Does bee-keeping belong here?," mused Dr. Nelson. "Does sheep-breeding? Does horse-breeding? Does poultry raising? Does not agriculture in a broad sense include horticulture, forestry and animal culture as well as wheat and corn culture? If a farmer raises chickens why should he be excluded from the guild because he also breeds terrapin, frogs and carp?"

The biologist had an ax to grind, or, more properly, an oyster to shuck, since his report sought to show that the intensive oyster research he had been conducting was indeed agriculture. Some farmers had been hypercritical. The reason, Dr. Nelson said: "These (oyster) interests are remote from the general farmer." But, he emphasized, agriculture is more than planting vegetables, more than milking cows, more than picking apples or gathering eggs. Its boundaries are ever fluid.

Today, in New Jersey, these agricultural boundaries stretch enough to include not only oysters, but also salt hay, bees, sphagnum moss, mink, horseradish, cultivated sod, mushrooms, pigeons, trout, pussy willows, Chinese vegetables, muskrats, dandelions, pine cones and numerous other addenda.

THERE may be argument about some of these (perhaps all, if the debater happens to believe that only red barns, green pastures, chicken houses and rows of vegetables make a farm). Some of these unusual farm ventures come and go, rising and falling with swiftly veering fads. Some are highly specialized, requiring skills and knowledge so unique that they are unlikely ever to be discussed at general farm meetings.

Some verge on hobbies; such as bees and mink often do. Yet, there are those who make solid livings out of what is but a spare-time hobby of others. Some are off-season adjuncts to a major farm operation—such as muskrat trapping and salt hay cutting or the gathering of sphagnum moss. Some, like horseradish or Chinese vegetables or pussy willows, are a high catering to public demands.

Thus, there is no exact pinning down of the unusual or varied ways in which some of New Jersey's farm

SIDELINES in AGRICULTURE

Unusual Farm Ventures in New Jersey Range from Raising Bees and Pigeons to Growing Horseradish and Mushrooms, While Off-Shore 'Cultivation' of Oysters Alone Is an Annual \$2,700,000 Industry

By JOHN T. CUNNINGHAM

poulation earn a living. These might well be called "anything to make a dollar"—a common American characteristic also known as "anything for a buck."

TAKE oysters. Dr. Nelson had his 1888 say about "pray, what is agriculture" to get over the point that oyster-ing IS farming. It may still be hard to sell the idea to some, since the graceful oyster fleet putting out from Bivalve in Cumberland County seems to divorce oyster-ing from farming.

Let Dr. Nelson explain this paradox, in words as good in 1955 as they were in 1888:

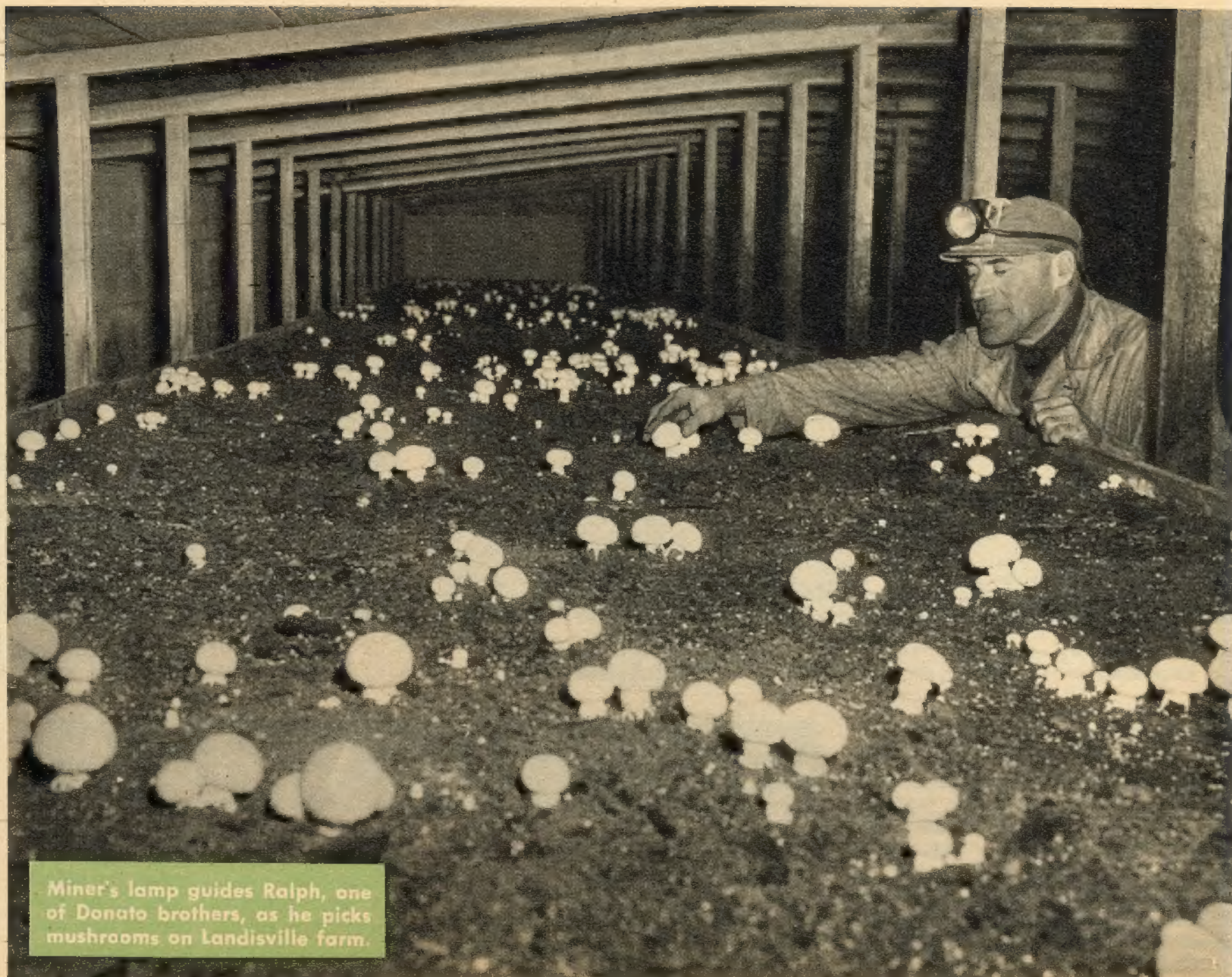
"It will broaden a farmer's sympathies to learn that off on the coast there are men who call themselves 'oyster farmers'; who 'cultivate' oysters on 'farms'; who 'sow' oyster 'seed' and 'transplant' oyster 'plants'; who let their 'ground' lie 'fallow' to 'rest' now and then, because it has raised so many 'crops' as to be exhausted.

"... these men hold such and so many 'acres'; who after having 'har-

This is the 14th in a series of articles on New Jersey's highly diversified agriculture, vigorous and growing despite the constant inroads of industrial and residential development. Next week: The New Jersey Experimental Station.



sphagnum moss used by florists.



Miner's lamp guides Ralph, one of Donato brothers, as he picks mushrooms on Landisville farm.

vested' a 'crop' have to 'drag' the 'field' to 'clean' it preparatory to receiving the new 'seed' and even have to 'mow' it with a genuine submarine 'mowing machine'; and so we might go through the vocabulary of oyster operations and show that the cultivation of oysters is more like the cultivation of potatoes than animals, for the oyster can no more locomote than can a potato."

Dr. Nelson's experimental work with oysters will be further discussed in the next article in this series; suffice to say here that in New Jersey the men who go down to farm in boats have a \$2,700,000 industry in their Delaware Bay farm acreage. They "sow" and they "harvest"—and some possibly might themselves even dispute the fact they are farmers. But they are.

ACTUALLY it might have been easier to think about oysters or anything else as farming back in Dr. Nelson's 19th century days, because then farmers experimented more with idle acres. The state and the nation had not yet settled down to the intense specialization which now marks agriculture. It's intriguing to investigate the items which farmers of long ago thought might thrive in New Jersey.

In 1815, for example, one John Hallock of New York settled at Tuckerton and proceeded to make himself an outcast with the young of the day. According to an old history, "he introduced the culture of the castor bean and the manufacture of castor

oil, which for several years yielded large profits."

Nothing changed American agriculture quite as much as the Civil War; the beginning of specialization dates from the war and the decades immediately after. The Civil War also cut off supplies of Southern cotton, tobacco and sugar cane. For two decades many a New Jersey agriculturist concerned himself with the growing of these.

The New Jersey State Agricultural Society in 1862 urged the growing of cotton and tobacco in New Jersey and instructed its secretary to buy some seed of both plants. The Society had no intention of plunging; it limited the secretary to \$25. Cotton failed to thrive, but annual tobacco harvests ranged as high as 150,000 pounds in the war years.

BACK in Civil War days a man could do without tobacco, his wife might even do without new cotton fabrics—but all agreed that something had to be done to get "sweetnings" to replace good rich New Orleans molasses, off store shelves because of the war. Farmers took to growing their own "Chinese sugar cane"—in patches of a half acre or less—and had it mashed into sorghum syrup at one of the scores of sorghum mills throughout the state.

Return of New Orleans 'lasses eliminated the general need for sorghum patches by 1865, but sorghum culture swept back in 1881 when the state legislature provided a bounty of \$1 a ton for sorghum cane grown for

sugar—plus one cent per pound for sugar so made. An important sugar factory began operations at Rio Grande in Cape May and its owners grew 2,000 acres of cane annually until 1885. Then outside competition cut in, the bounty expired and so did the Rio Grande sugar dream. Some kept on with sorghum but ruinous weather in 1889 convinced even the most fervent sugar enthusiasts that they couldn't profitably raise cane in Jersey.

Agriculturists had another try at seeing what they could coax out of the New Jersey soil in World War I, when German submarines cut off supplies of things like licorice and digitalis and bella donna. A Camden drug manufacturer sponsored small plantings of bella donna and digitalis; found neither would succeed. An important American licorice processor bought 17,000 acres near Vineland, cleared 200 of them and tried for the first time in America to cultivate licorice plants. The plants grew well enough, but labor proved too high an item.

SO, THERE has been a sizable willingness through the years on the part of New Jersey farmers to try anything. But this is an age of specialization; today farmers must shrewdly recognize that a market is a necessary prerequisite. Many a New Jersey farmer takes full advantage of public tastes and/or temporary shortages of a product usually grown elsewhere.

Horseradish is a good case in

point. A quarter century ago Essex County ranked among the top five horseradish counties in the nation. Gradually, however, competition from the St. Louis area forced local farmers into other vegetables. Then two years ago floodwaters rolled in over the Missouri horseradish fields and temporarily ruined the hot roots. The few horseradish growers still left in New Jersey quickly expanded their plantings, taking advantage of the prices close to 60 cents a pound—but horseradish is never likely to reassume its old New Jersey vigor.

Vegetables in general prove that a farmer gives the public what it wants. It never ceases to surprise the casual visitor that Essex County grows 59 varieties of vegetables. It comes as an astounding fact to realize that Essex, Bergen and Passaic counties each year combine to harvest nearly a million pounds of cultivated dandelion greens.

Yet of all vegetable growers the rarest are the Chinese farmers who use their special knowledge to produce Chinese vegetables for the numerous Oriental restaurants in the metropolitan New York and Newark area. There are not many, but within a three or four-mile radius of English-town three different Chinese farmers are coaxing from Monmouth County soil vegetables like white cabbage, dark cabbage, yellow yard-long cabbage, many types of herbs, savoy cabbage, Chinese leeks and other makings of chop suey, chow mein and other items on a Chinese restaurant menu.

Important, too, in the Chinese market. (Continued on Following Page)



Market-ready squabs at Dyer & Davis farm in Newfield, which has shipped over two million dressed squabs since establishment in 1914.



Joseph Capozello (left) and son Rocco of Hightstown with sample of the sod they grow for golf courses, baseball parks, estates, etc.

(Continued from Preceding Page)

kets are pigeons and the New York Kosher markets also demand many squabs. A few New Jersey farmers take advantage of that demand, two good examples being G. V. Baker and Dyer & Davis, both in Newfield in Gloucester County. Baker dates back to 1922, Dyer & Davis to 1914. Between them they annually ship close to 150,000 squabs, each weighing between $\frac{3}{4}$ of a pound and one pound.

Dyer & Davis estimated after their first 20 years of business that they shipped one million dressed squabs. Now after 40-plus years, they are well over the two million mark. Their neighbor and competitor, G. V. Baker, took intelligent advantage of postwar surplus sales by buying 2,000 homing pigeons, most of whom had seen combat service. These winged GI's settled down to the peacetime task of helping Baker in his cross-breeding operation.

SQUAB certainly sets the taste buds to reminiscing about delicacies; there is no better time to bring up mushrooms, another tasty New Jersey treat. Here is a high specialty, something calling for hard-to-learn skills and full-time concentration, knowledge of soils and temperatures and awareness of the effects of humidity.

New Jersey has several mushroom farmers, spread about in varied locations—possibly as many as a dozen, including one whose "farm" is in an abandoned Morris County iron mine. Of all the mushroom plantings, probably most widely known is the mushroom farm of the Donato brothers near Landisville in Cumberland County. The Donatos have a long heritage of know-how, carrying on a business started in 1924 by their father.

Like all mushroom growers, the Donatos are in the dark much of the time, since the culture of their toothsome product requires natural light to be excluded from the beds. This is one commodity where the sun is a definite liability. The Donatos work

by light of mine lamps. In the flickering glow of the lamps they make compost, collect spores, keep the growing rooms free of foreign matter. The mushroom growers are practicing an old skill—truly an art and definitely a full-time career.

No one can say for sure how many mushrooms are produced annually in the Garden State, but the Donato enterprise is responsible for some 75,000 to 100,000 pounds annually. It's reasonable to guess that in a good year as many as a half million pounds of mushrooms go from Jersey beds to enhance the flavor of good rich steaks.

MUCH of the state's unusual agriculture is in South Jersey, partially because of the longer growing season, partially because farmers in that area need extra income and partially because somewhat lower land prices permit an entrepreneur to try something different. To illustrate the latter, consider the pussy willow growers of Monmouth County.

At least two farmers make a reasonable living from pussy willows, cut in February and March and forced into bloom indoors. The resulting stems, with their furry silver-gray buds, are in demand by New York florists. Both of these specialists, by the way, are Greeks; one of whom cultivates 25 acres, the other 15 acres. To augment their incomes, they also cut forsythia shoots and force them into yellow flower long before nature opens buds outside.

Not nearly as deliberately planned are numerous other floral specialties harvested in various parts of South Jersey. These range from sphagnum moss to pine cones, from red oak leaves to laurel "ropes," from holly for home-made wreaths to cat-o'-nine-tails. Is this farming, or is it akin to inland beach-combing? Who is to say for sure; is taking advantage of what nature supplies in the forests and

swamps so far different from using upland green grass for grazing?

Sphagnum moss is one of the oldest and most profitable specialties harvested in a region more-or-less centering on Chatsworth in Burlington County. The moss grows naturally in the cedar swamps, where men tote 'tater rakes and drags to gather it from spring to fall. They pull out tons of it, dry it and press it into 30 to 35-pound bales for easy shipping.

Florists use sphagnum moss extensively. The moss holds moisture around plant roots, stock shipped in sphagnum arrives fresh and ready to grow. The moss has many other uses among florists, and, during World War I, it was in great demand in Great Britain to use in surgical dressings because of its absorbent qualities. Today not nearly as much sphagnum moss is harvested as 25 years ago but still the moss is a sizable supplier of grocery money to many South Jersey farm families.

Occasionally during the winter a trailer-truck loaded with pine cones, properly puffed up after being put through a pine cone "popper" at Brown's Mills, heads for florist markets in New York or Philadelphia. In the fall, a ready market is found for branches of oak trees with handsome red leaves attached. Just before Christmas, hundreds of thousands of yards of laurel rope (laurel wound around rope) are sent from the Vineland and Newfield areas for stringing along city streets in Chamber of Commerce holiday spirit. Many a dollar is picked up at the same time by weaving Christmas wreaths from "Robin Hood" (a ground-hugging green similar to ground pine and wild holly).

DOIN' what comes naturally is a hallmark of much of the state's most diversified agriculture, and there is no better illustration than the cutting

of salt hay in the broad marshy meadowlands of South Jersey. The inroads of civilization are cutting in on the salt hay marshes—mainly because of drainage ditches dug through by mosquito control workers—but there is still a heap of hay cut.

Estimates on the vastness of the salt marshes vary, from about 200,000 to 300,000 acres. Once most of this was used for hay gathering, with the only precautions being double-width tires on mowers and wagons and extra-large mud shoes for the horses to keep equipment and animals from bogging down. Now the mosquito ditches make mowing hazardous in many regions and the soft marshes often won't support the tractors which have supplanted horses.

Still, down along the Delaware Bay side of the state, particularly in Cape May and Cumberland counties, huge stacks of hay proclaim that the marshes still are valuable for salt hay. Uses of salt hay are varied — for mulching, for packing glassware and pottery, for use in building roads over marshy land, for placing atop concrete in the winter to keep it from freezing. Several farmers still harvest as much as 4,000 acres, pick up four to six tons per acre and get anywhere from \$16 to \$25 per ton. That can add up to a stack of money.

WEST of the level salt hay marshes of Cumberland, the Delaware River shoreline gets moody and desolate—just the kind of a place muskrats call home. Down near Hancock's Bridge farmers know this well, and between late fall harvesting and early spring plowing they go down to the bogs to trap.

Some 33,000 acres of muskrat meadows remain in Salem County, much of it land so dreary as to be foreboding—yet so valuable for the "Hudson seal" which inhabits the moors that as much as \$100 per acre is a not unreasonable asking price. There are a few farmers who have as many as 2,000 acres of muskrat marsh, many who have 400 to 500 acres. Out on the marshes, where the muskrats

JERSEY FARM SIDELINES

build mounds three feet high and six feet across at the base, there is gold to be had in skins.

It's said that some 250,000 muskrats are taken from the marshes every season. That can mean as much as \$500,000 in the four-month trapping period. It's a profitable off-season enterprise, kept so by the tide banks, dikes and sluices built cooperatively by the farmers and trappers of the area. This isn't farming either? Maybe not, but muskrats are a legitimate concern of the Salem County agricultural agent; he keeps tabs on it, gets consulted by the farmers about it. Ask him about "odd farming"; he'll answer, "Well, there are the muskrat farmers . . ."

"Hudson seal" makes a fine coat, no doubt of that, but even the muskrat would admit that his pelt is nothing beside the mink. Once the mink had to be trapped like the muskrat, today ranch-raised animals account for most of the mink destined to grace the backs of humans. That, in New Jersey, is the basis for a multimillion-dollar agricultural pursuit which includes the breeding of silver fox and chinchilla as well as the mink. Mink farms alone, which are located in almost every county, represent an investment well over \$2,000,000.

NEW JERSEY'S fur breeders claim the state's moderate climate is ideal for the raising of mink, chinchilla and silver foxes. Fur ranches are expanding rapidly, particularly those devoted to mink. Some mink farms have 800 or more of the soft-furred animals—a not tremendous number when it is realized that 60 to 100 mink must lose their skins for a single coat. Normally

a deep rich brown in color, New Jersey mink (and their relatives on ranches all over) now have pelts ranging from blue-black to white as the result of scientific breeding.

Some of the top fur breeders started as hobbyists—not at all out of the way in agriculture, of course. Two of New Jersey's most important major agricultural divisions, poultry and floriculture, had their beginnings in the state among wealthy hobbyists 75 or so years ago. The dairy industry owes much to hobbyists who constantly improved the blood lines of cattle. Similarly, one of the most important agricultural pursuits today treads a path somewhere between the hobbyist and the full-time specialist. That is bee keeping, of value in agriculture far beyond the honey which bees produce.

THE Garden State bee does give honey, true—some million pounds of it in a good year—but above all, the bee carries out the endless cycle of nature by pollinizing fruit trees and many other plants. Without the bee, much of the state's harvest of apples, cranberries and blueberries, to mention three commodities, would be meager.

New Jersey has thousands of beekeepers, most of them hobbyists, but about 10 per cent of the keepers of the bees get all or a substantial share of their livelihood from hives. These intense professional specialists move their hives into apple orchards and into the cranberry and blueberry bogs at blossom time. Domesticated bees are necessary; the march of civilization, with its cutting down of natural cover, has drastically reduced the



Ethel and Marie Leperopolos, daughters of a Matawan farmer, with some of Monmouth County's pussy willow sought by New York florists.



Broad-wheeled wagons carry salt hay from fields in Cape May County. BELOW: Marsh mounds mark muskrat colony near Hancock's Bridge.



wild bee population in New Jersey.

Most of the owners of big apple orchards in South Jersey rent hives of bees as insurance to make sure their buds will be pollinated. About two hives for every three acres usually suffices. New Jersey has about 15 individuals able to meet the demand, meaning each of them has several hundred hives. If three pollinating moves can be made in a year, a good income is assured.

But honey is important, too, since New Jersey is close to the best markets. While conditions for honey gathering are not as good as those in Western states, most growers average 25 to 30 pounds or more of honey per hive per year and in good local markets that sells at 30 cents a pound or thereabouts. Accordingly, the state's 31,000 hives can mean a sweet little income (although admittedly far from enough to permit bee-keeping to be more than a hobby for most).

THERE are many ways to make money in rural areas, depending on the times. During Prohibition a North Jersey farm wife is known definitely to have made a tidy living from juniper berries, a necessity in gin. Now, with the growing interest in home beautification, some farmers dig birch and dogwood trees and sell them. These are over and above the trees grown in nurseries for the same purpose. Some farmers rent parts of their property to fish and game clubs.

Some grow pheasants for sportsmen's groups. Occasionally a farmer cuts into a prime meadow and sells chunks of sod.

Sod can be a highly profitable item, by the way, in these good times. Many a farmer along the rich bottom lands fringing on the Raritan River picks up a tidy extra income by selling river bank sod. Other farmers, maybe a dozen or so in the state, cultivate sod and sell it for use in big league baseball parks, on high school football fields, in cemeteries, on estate lawns, college campuses and polo fields. Joseph Capozello, as one illustration, has 30 acres of lush sod growing in Hightstown—as smooth as a billiard table and as rich and green as a landscape painting.

PRAY then, what is farming? Is it sod raising, bee-keeping, mink breeding? Is it muskrat trapping, salt hay cutting, sphagnum moss raking? Is it pussy willows or pigeons or Chinese vegetables or horseradish? Is it oystering?

All these? None of these? It's all a matter of opinion. All these and more are here in New Jersey, some of them never show up in census statistics and some of them are never mentioned at farmers' meetings.

Yet, to the man jingling the dollar in his pocket, a dollar earned from sphagnum moss is every bit as good as a dollar from a prize herd of purebred Aberdeen-Angus cattle.